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Manhee Jo

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EXAMINER

SAMUEL, DEWANDA A

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

03/13/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/689,702	Applicant(s) JO ET AL.	
	Examiner DeWanda Samuel	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 3 and 7-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to **claims 1-6** presently presented and newly added **claims 7-18** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1 and 2** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugai et al. (US 7,167,474) in view of Tsukakoshi et al. (US Patent 6,496,510).

With regard to claim 1, Sugai et al. disclose having a *routing control system, comprising: a plurality routing devices for transferring packets on a network, and a control server for controlling a transfer route of said packets*, Sugai et al. discloses having a network 50 comprised router 1 which includes a routing manager 60 (“ control server”) exchanging routing information with other routers (“plurality routing devices”) . It is known in the art that routers transfer packets or frames to their destination.

wherein each of said plurality routing devices includes routing related information reception means for receiving routing related information from an adjacent routing device; Sugai et al. discloses others routers receive routing information from the routing manager 60 (“ control server”, column 4 line 60-67). However, Sugai et al. does not explicitly discloses wherein each of said plurality routing devices includes routing related information reception means for receiving routing related information from an adjacent routing device. Tsukakoshi et al. discloses having a plurality of router node devices (“plurality routing devices”) receiving routing information (“routing related information”) from other router node devices (“adjacent routing device”, Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have others routers receive routing information from the routing manager 60 (“ control server”) as taught by Sugai et al. whereby plurality of router node devices (“plurality routing devices”) receiving routing information (“routing related information”) from other router node devices

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("adjacent routing device") as taught by Tsukakoshi et al. provide a device that will efficiently process data at a higher speed.

generation means for generating a temporary routing control table

based on the received routing related information; Sugai et al. discloses having a route table 15 (column 6 line 19). However, Sugai et al. does not explicitly discloses generation means for generating a temporary routing control table based on the received routing related information. Tsukakoshi et al. discloses having a routing table generation unit for creating a routing table according to the routing information collected (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a route table as taught by Sugai et al. generated by a routing table generation unit creating a routing table according to the routing information collected as taught by provide a device that will efficiently process data at a higher speed.

and transmission means for transmitting the temporary routing control-table_

generated by said generation means to said control server, Sugai et al. discloses having a router 1 comprise of a routing manager 60 ("control server", column 4 line 60-67).However, Sugai et al. does not explicitly discloses transmission means for transmitting the temporary routing control table generated by said generation means to said control server. Tsukakoshi et al. discloses distributing

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("transmission means") a generated routing table to other routing node devices (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a router 1 comprise of a routing manager 60 ("control server") as taught by Sugai et al. receiving distributed ("transmission means") generated routing table to other routing node devices as Tsukakoshi et al. advantageously provide a efficient network with autonomous route control.

and said control server includes reception means for receiving [[the]] a plurality of the temporary routing control tables transmitted by the transmission means of said plurality of routing devices; Sugai et al. discloses having a router 1 comprise of a routing manager 60 ("control server", column 4 line 60-67).However, Sugai et al. does not explicitly discloses having a plurality of the temporary routing control tables transmitted by the transmission means of said plurality of routing devices. Tsukakoshi et al. discloses generating routing table based on the routing information distributed from the other router node devices (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a router 1 comprise of a routing manager 60 ("control server") as taught by Sugai et al. receiving distributed ("transmission means") generated routing table to other routing node devices as

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Tsukakoshi et al. advantageously provide a efficient network with autonomous route control.

and control means for controlling the transfer route of said packets by using the plurality of the temporary routing control tables received by said reception means. Sugai et al. discloses having a routing processors 10 for executing the routing function (“controlling means”, column 5 line 3-5). However, Sugai et al does not explicitly discloses using the plurality of the temporary routing control tables received by said reception means. Tsukakoshi et al. discloses having a forwarding unit using routing table received from a routing collection unit (“reception means”, Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have routing processors 10 for executing the routing function (“controlling means”) as taught by Suagi et al. utilizing routing table received from a routing collection unit (“reception means”) as taught by Tsukakoshi et al. advantageously provide a efficient network with autonomous route control.

With regard to claim 2, in combination Sugai et al. and Tskakoshi et al. teaches the routing control system recited in claim 1. *wherein the transmission means of each of said plurality of routing devices transmits said temporary*

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routing control table to said control server when the temporary routing control table of said packets is changed or regenerated. Sugai et al. discloses having a router 1 comprise of a routing manager 60 ("control server", column 4 line 60-67). However, Sugai et al. dose not explicitly discloses having a transmission means of each of said plurality of routing devices transmits said temporary routing control table to said control server when the temporary routing control table of said packets is changed or regenerated. Tsukakoshi et al. discloses having a plurality router node devices comprised of distribution unit ("transmission means") within each router node device transmitting routing information to other router node devices (Abstract). Tsukakoshi et al. further discloses each forwarding unit 15 forwards packets according to the contents of the routing table determined by the received update contents of the routing table 22 (column 6 line 8-10).It is inferred the information in the routing table is updated meaning information is temporary.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a router 1 comprise of a routing manager 60 ("control server") as taught by Sugai et al. receiving routing information from a plurality router node devices and as taught by Tsukakoshi et al. provide a efficient network with autonomous route control.

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5. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugai et al. (US 7,167,474) in view of Tsukakoshi et al. (US Patent 6,496,510) as applied to claim 1 above, and further in view of Ayandeh (US Patent 6,069,895).

With regard to claim 4, in combination Sugai et al. and Tskakoshi et al. teaches the routing control system recited in claim 1. *wherein said control server further includes update means for updating a first temporary routing control information table received by said reception means to a second temporary routing control information table that is newly received by said reception means when a predetermined time has elapsed after said first temporary routing control information table is stored, and then storing said second temporary routing control table in storage means as routing control information.* Sugai et al. discloses having a router 1 comprise of a routing manager 60 ("control server", column 4 line 60-67). However, Sugai et al. does not discloses includes update means for updating a first temporary routing control information table received by said reception means to a second temporary routing control information table that is newly received by said reception means when a predetermined time has elapsed after said first temporary routing control information table is stored, and then storing said second temporary routing control table in storage means as routing control information. Ayandeh discloses having a network route server ("control server") comprised of a intelligent line-cards whereby provides a

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mechanism for refreshing the routing tables at a regular interval (column 8 line 1-22).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have router 1 comprise of a routing manager 60 ("control server") as taught by Sugai et al. utilizing intelligent line-cards whereby provides a mechanism for refreshing the routing tables at a regular interval as taught by Ayandeh advantageously provide a efficient network with autonomous route control.

6. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata (US Patent 6,760,314) in view of Tsukakoshi et al. (US Patent 6,496,510).

With regard to claim 5, Iwata discloses having a router server a *routing control server which is connected to a plurality routing devices for transferring packets on a network and controlling the transfer route of said packets*, Iwata disclose having a load distribution server ("control server") connected to a plurality of nodes (10a-10d ", routing devices)...node 10a comprised a transmission unit 17 transmit data to adjacent nodes 10b-10d

comprising: reception means for receiving, in the routing control server, a plurality of temporary routing control information tables transmitted from said plurality routing devices, each of the plurality of temporary routing control tables

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being generated, by a corresponding routing device of the plurality of routing devices, based on routing related information received from an adjacent routing device; Iwata discloses having a load distribution server 30 ("control server") connected to a plurality node 10a-10d ("plurality routing devices") whereby receiving network state information from all of the nodes 10a-10d (column 6 line 17-25). However, Iwata does not explicitly discloses receiving plurality of temporary routing control tables transmitted from said plurality of routing devices, each of the plurality of temporary routing control tables being generated, by a routing device of the plurality of routing devices, based on routing related information received from an adjacent routing device. Tsukakoshi et al. discloses routing node devices distributing routing information within the routing table to other routing node devices and the routing information is based on routing information collected for other routing devices (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a load distribution server ("control server") as taught by Iwata receiving routing information within the routing table as taught by Tsukakoshi et al. provide a device that will efficiently process data at a higher speed.

and control means for controlling the transfer route of said packets by using the plurality of temporary routing control tables received by said reception means.

Iwata discloses having a network state information reception unit 31 (column 7

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line 66-67). However, Iwata does not explicitly disclose having a control unit configured to control the transfer route of said packets by using the plurality of temporary routing control tables received by said reception unit. Tsukakoshi et al. discloses having a forwarding unit ("control unit") for forwarding a packet between one network and for forwarding the packet between the network connected to the router node device....according to routing table (Abstract). Tsukakoshi et al. further discloses each forwarding unit 15 forwards packets according to the contents of the routing table determined by the received update contents of the routing table 22 (column 6 line 8-10). It is inferred the information in the routing table is updated meaning information is temporary.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a load distribution server ("control server") as taught by Iwata comprised of a forwarding unit ("control unit") for forwarding a packet between one network and for forwarding the packet between the network connected to the router node device....according to routing table as taught by Tsukakoshi et al. that will efficiently process data at a higher speed.

With regard to claim 18, Iwata discloses having a *routing control server which is connected to a plurality of routing devices for transferring packets on a network and controlling the transfer route of said packets*, Iwata discloses having a load distribution server ("control server") connected to a plurality of nodes (10a-

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10d “, routing devices)...node 10a comprised a transmission unit 17 transmit data to adjacent nodes 10b-10d

comprising: a reception unit configured to receive, in the routing control server, a plurality of temporary routing control tables transmitted from said plurality of routing devices, each of the plurality of temporary routing control tables being generated, by a routing device of the plurality of routing devices, based on routing related information received from an adjacent routing device; lwata discloses having a load distribution server 30 (“control server”) connected to a plurality node 10a-10d (“plurality routing devices”) whereby receiving network state information from all of the nodes 10a-10d (column 6 line 17-25). However, lwata does not explicitly discloses receiving plurality of temporary routing control tables transmitted from said plurality of routing devices, each of the plurality of temporary routing control tables being generated, by a routing device of the plurality of routing devices, based on routing related information received from an adjacent routing device. Tsukakoshi et al. discloses routing node devices distributing routing information within the routing table to other routing node devices and the routing information is based on routing information collected for other routing devices (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a load distribution server (“control server”) as taught by lwata receiving routing information within the routing table

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as taught by Tsukakoshi et al. provide a device that will efficiently process data at a higher speed.

and a control unit configured to control the transfer route of said packets by using the plurality of temporary routing control tables received by said reception unit.

Iwata discloses having a network state information reception unit 31 (column 7 line 66-67). However, Iwata dose not explicitly disclose having a control unit configured to control the transfer route of said packets by using the plurality of temporary routing control tables received by said reception unit. Tsukakoshi et al. discloses having a forwarding unit (“control unit”) for forwarding a packet between one network and for forwarding the packet between the network connected to the router node device....according to routing table (Abstract). Tsukakoshi et al. further discloses each forwarding unit 15 forwards packets according to the contents of the routing table determined by the received update contents of the routing table 22 (column 6 line 8-10).It is inferred the information in the routing table is updated meaning information is temporary.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a load distribution server (“control server”) as taught by Iwata comprised of a forwarding unit (“control unit”) for forwarding a packet between one network and for forwarding the packet between

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the network connected to the router node device....according to routing table as taught by Tsukakoshi et al. that will efficiently process data at a higher speed.

7. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukakoshi et al. (US Patent 6,496,510) in view of Iwata (US Patent 6,760,314).

With regard to claim 6, Tsukakoshi et al. discloses having a *routing control method comprising: receiving, in each of a plurality of routing devices, routing related information from an adjacent routing device;* Tsukakoshi et al. discloses having a plurality router node devices (“plurality routing devices”) distributing routing information to other router node devices (Abstract). *generating a temporary routing control table, within each of the plurality of routing devices, based on the received routing related information;* Tsukakoshi et al. discloses having a routing table generation unit for generating the routing table based on the collected routing information and the routing information distributed from the other router node devices (Abstract).

transmitting, by each of the plurality of routing devices, the generated temporary routing control table to a control device server; Tsukakoshi et al. discloses having distribution unit (“ transmission unit”) distributing the collected routing information (e.g. routing tables) to other router node devices (Abstract). However, Tsukakoshi et al. does not explicitly disclose sending temporary routing control

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table to a control server. Iwata discloses having a load distribution server 30 (“control server”) receiving network state information from the plural nodes (Abstract). It is construed this information is capable of being in the form of a table.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have distribution unit (“transmission unit”) distributing the collected routing information (e.g. routing tables) to other router node devices as taught by Tsukakoshi et al. such as a load distribution server 30 as taught by Iwata advantageously provide a efficient network with autonomous route control.

receiving [[the]] a plurality of the transmitted temporary routing control information tables in the control server; Tsukakoshi et al. discloses having a cluster type network comprised of a plurality of router nodes transferring routing protocol packets to or from the cluster type router 11 (“control server”) to get network connection information (column 3 line 37-67). However, Tsukakoshi et al. does not discloses to receive a plurality of the temporary routing control tables transmitted by the transmission unit of said plurality of routing devices. Iwata discloses having a load distribution server 30 receiving network state information from the plural nodes (“routing devices”, Abstract). It is construed this information is capable of being in the form of a table.

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a cluster type router 11 (“ control server”) as taught by Tsukakoshi et al. receiving receiving network state information from the plural nodes (“ routing devices”) as taught by Iwata advantageously provide a efficient network with autonomous route control.

and controlling, using the control server the transfer route of said packets by using the received plurality of temporary routing control tables received.

Tsukakoshi et al. discloses having a forwarding unit (“control unit”) for forwarding a packet between one network and for forwarding the packet between the network connected to the router node device....according to routing table (Abstract). Tsukakoshi et al. further discloses each forwarding unit 15 forwards packets according to the contents of the routing table determined by the received update contents of the routing table 22 (column 6 line 8-10).It is inferred the information in the routing table is updated meaning information is temporary.

With regard to claim 17, Tsukakoshi et al. discloses having a *routing control system, comprising: a plurality of routing devices for transferring packets on a network, and a control server for controlling a transfer route of said packets,* Tsukakoshi et al. discloses having a cluster type network comprised of a plurality of router nodes transferring routing protocol packets to or from the cluster type

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router 11 (“ control server”) to get network connection information (column 3 line 37-67).

wherein each of said plurality of devices includes a routing related information reception unit configured to receive routing related information from an adjacent routing device; Tsukakoshi et al. further discloses having plurality of router node devices (“plurality of devices”)...routing information exchanged among routing devices (Abstract). Inferred the routing devices have receiving means that is capable of receiving routing information from other routing devices.

a generation unit configured to generate a temporary routing control table based on the received routing related information; Tsukakoshi et al. discloses having a routing table generation unit for generating the routing table based on the collected routing information and the routing information distributed from the other router node devices (Abstract).

and a transmission unit configured to transmit the temporary routing control table generated by said generation unit to said control server, Tsukakoshi et al.

discloses having distribution unit (“ transmission unit”) distributing the collected routing information (e.g. routing tables) to other router node devices (Abstract). However, Tsukakoshi et al. does not explicitly disclose sending temporary routing control table to a control server. Iwata discloses having a load distribution server 30 (“control server”) receiving network state information from the plural nodes (Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have distribution unit (“transmission unit”) distributing the collected routing information (e.g. routing tables) to other router node devices as taught by Tsukakoshi et al. such as a load distribution server 30 as taught by Iwata advantageously provide a efficient network with autonomous route control.

and said control server includes a reception unit configured to receive a plurality of the temporary routing control tables transmitted by the transmission unit of said plurality of routing devices; Tsukakoshi et al. discloses having a cluster type network comprised of a plurality of router nodes transferring routing protocol packets to or from the cluster type router 11 (“control server”) to get network connection information (column 3 line 37-67). However, Tsukakoshi et al. does not discloses to receive a plurality of the temporary routing control tables transmitted by the transmission unit of said plurality of routing devices. Iwata discloses having a load distribution server 30 receiving network state information from the plural nodes (“routing devices”, Abstract).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a cluster type router 11 (“control server”) as taught by Tsukakoshi et al. receiving receiving network state information from the plural nodes (“routing devices”) as taught by Iwata advantageously provide a efficient network with autonomous route control.

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and a control unit configured to control the transfer route of said packets by using the plurality of the temporary routing control tables received by said reception unit. Tsukakoshi et al. discloses having a forwarding unit ("control unit") for forwarding a packet between one network and for forwarding the packet between the network connected to the router node device....according to routing table (Abstract). Tsukakoshi et al. further discloses each forwarding unit 15 forwards packets according to the contents of the routing table determined by the received update contents of the routing table 22 (column 6 line 8-10).It is inferred the information in the routing table is updated meaning information is temporary.

Allowable Subject Matter

8. Claims 3, 7-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Yagyu et al. (US Patent 7,029,450) discloses having a data transmission system having a plurality of dynamic route control units.

Woo et al. (US 263,091) discloses a scalable routing system.

Takihiro et al. (US 6,700,874) discloses having a network system having route verification function and the component apparatuses and method thereof.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DeWanda Samuel whose telephone number is (571) 270-1213. The examiner can normally be reached on Monday-Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art
Unit 2616

DeWanda Samuel
2/29/2008